

REMARKS

Claims 2, 3, 5, 6 and 17 have been amended. Claims 1-22 remain in the application.

In particular, claims 2 and 17 have been amended to more particularly point out relationships between transceivers and sets and the filters of those sets. The amendments better conform these claims to the filed specification and drawings. Claim 3 has been amended to better correspond to amended claim 2.

The Examiner objected to claims 5 and 6 because of an improper antecedent and they have, therefore, been amended to properly depend from claim 4. Applicants appreciate the detailed examination that revealed this error.

The Examiner rejected claims 1-22 under 35USC§103(a) as being unpatentable over Beyers, II et al. (hereinafter Beyers) in view of Dinwiddie.

Applicants independent claim 1 is directed to a data communication system which comprises:

- a two-conductor medium;
- a plurality of transceivers; and
- sets of filters wherein the filters of each set are configured to define a respective communication channel over said medium and are coupled to said medium in respective transceivers;
- said transceivers thereby enabled to communicate data signals over the respective communication channels of said sets.

The Examiner stated that **Beyers** discloses a two-conductor medium and a plurality of transceivers but “does not specifically teach --- sets of filters wherein the filters of each set are configured to define a respective communication channel”. The Examiner also stated that **Dinwiddie** teaches “high pass frequency filters 86, 87 --- low pass filters 88, 89” and that “it would have been obvious --- to modify Beyers with Dinwiddie”.

However, the Manual of Patent Examining Procedure (MPEP) states “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the combination” and further states “if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification” (MPEP 2143.01).

It is prudent, therefore, to investigate if the proposed modification by Dinwiddie would render Beyer’s invention unsatisfactory for its intended purpose.

Beyers states that his “FIG. 1 shows a typical TV distribution plant 100 for distributing cable television signals to a subscriber and for receiving upstream messages from a subscriber terminal” (column 9, lines 25-28).

Beyers observes that “in a typical reverse system, there are four video channels available: T7, T8, T9 and T10”, he recites their frequency allocations “cable television channel T7 (5.75-11.75 megahertz), T8 (11.75-17.75 megahertz), T9 (17.75-23.75 megahertz) and T10 (23.75-29.75 megahertz)”, and he notes that a selected one of these will provide a “6 MHz reverse channel” (column 18, lines 20-21, column 1, lines 63-65 and column 17, line 60). After discussing various considerations, Beyers selects the T8 channel by reasoning “however, there is typically considerable bandwidth within the T8 channel with low enough noise and interference levels to support reliable communications --- the present frequency diverse RF-IPPV system is designed to utilize this fact” (column 18, line 64 to column 19, line 1).

Thus, Beyers teaches a TV distribution plant which sends cable television signals downstream on a plurality of 6 MHz-wide TV channels and sends

upstream messages on a selected one of these 6 MHz-wide TV channels. As Beyers showed when specifying four of these channels, cable television channels are 6 MHz-wide with no frequency spacing between channels. Obviously, all downstream channels must be present at all times to permit each subscriber to select a channel for viewing and the selected channel is then processed and visually presented by each subscriber's television set (130 in Beyers' FIG. 1).

Because Beyers sends upstream messages on one selected TV channel, there is no reason for modifying the upstream portion of Beyers' TV distribution plant with Dinwiddie's "high pass frequency filters 86, 87 --- low pass filters 88, 89" or with any other filters as there are no other channels present.

Because each television set conventionally selects and processes TV channels out of the set of downstream TV channels presented to them, there is no reason for modifying the downstream portion of Beyers' TV distribution plant with Dinwiddie's "high pass frequency filters 86, 87 --- low pass filters 88, 89" or with any filters (e.g., 6 MHz bandpass filters). These channels are presently successfully passed downstream without filters. It is logical to ask, therefore, what is gained by making the distribution plant more complex?

More to the point, practical filters cannot be configured sharp enough to completely pass one 6 MHz-wide TV channel and exactly block edge-to-edge adjacent TV channels and, in addition, practical filters introduce phase distortions at their band edges. Generally, the sharper the filter edges, the greater the phase distortion. Significant information, therefore, would be lost and/or distorted by passing TV channels through such filters. Consequently, each subscriber's television performance would be degraded.

Thus, modifying Beyers' TV distribution plant (100 in FIG. 1) with the filters of Dinwiddie would significantly degrade the performance of his distribution plant. That is, it would render the prior art invention unsatisfactory for its intended purpose. In accordance with the quotation recited above from the MPEP, there is, therefore, no suggestion or motivation to make the proposed modification and without this suggestion, the resultant combination is not obvious.

Beyers and Dinwiddie do not, therefore, support a *prima facie* case of obviousness with respect to Applicants' claim 1. Because they neither separately anticipate the structures recited in claim 1 nor together support a *prima facie*

case of obviousness, Applicants' claim 1 patentably distinguishes over the cited art. Because Applicants' dependent claims 2-9 add further limitations to claim 1, they also patentably distinguish over the cited art.

Applicants' independent claims 10, 17 and 20 were also rejected as being unpatentable over Beyers in view of Dinwiddie. As shown above, modifying Beyers' with Dinwiddie would render the prior art invention unsatisfactory for its intended purpose and there is, therefore, no suggestion or motivation to make the proposed modification. Without this suggestion, the resultant combination is not obvious. Beyers and Dinwiddie do not, therefore, support a *prima facie* case of obviousness. Because they neither separately anticipate the structures recited in these claims nor support a *prima facie* case of obviousness, Applicants' claims 10, 17 and 20 patentably distinguish over the cited art. Because Applicants' dependent claims 11-16, 18 and 19, and 21 and 22 add further limitations to independent claims 10, 17 and 20, they also patentably distinguish over the cited art.

Because Applicants have shown that modifying Beyers with Dinwiddie would render Beyers unsatisfactory for his intended purpose, Applicants have not proceeded to investigate whether such modification would provide the limitations of Applicants' claims.

Applicants therefore request reconsideration and withdrawal of the objection and the rejections and an early allowance of claims 1-22.

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